

# **Bringing Order to Chaos: ScienceBase and Other Project Lifecycle Tools**

September 5, 2013

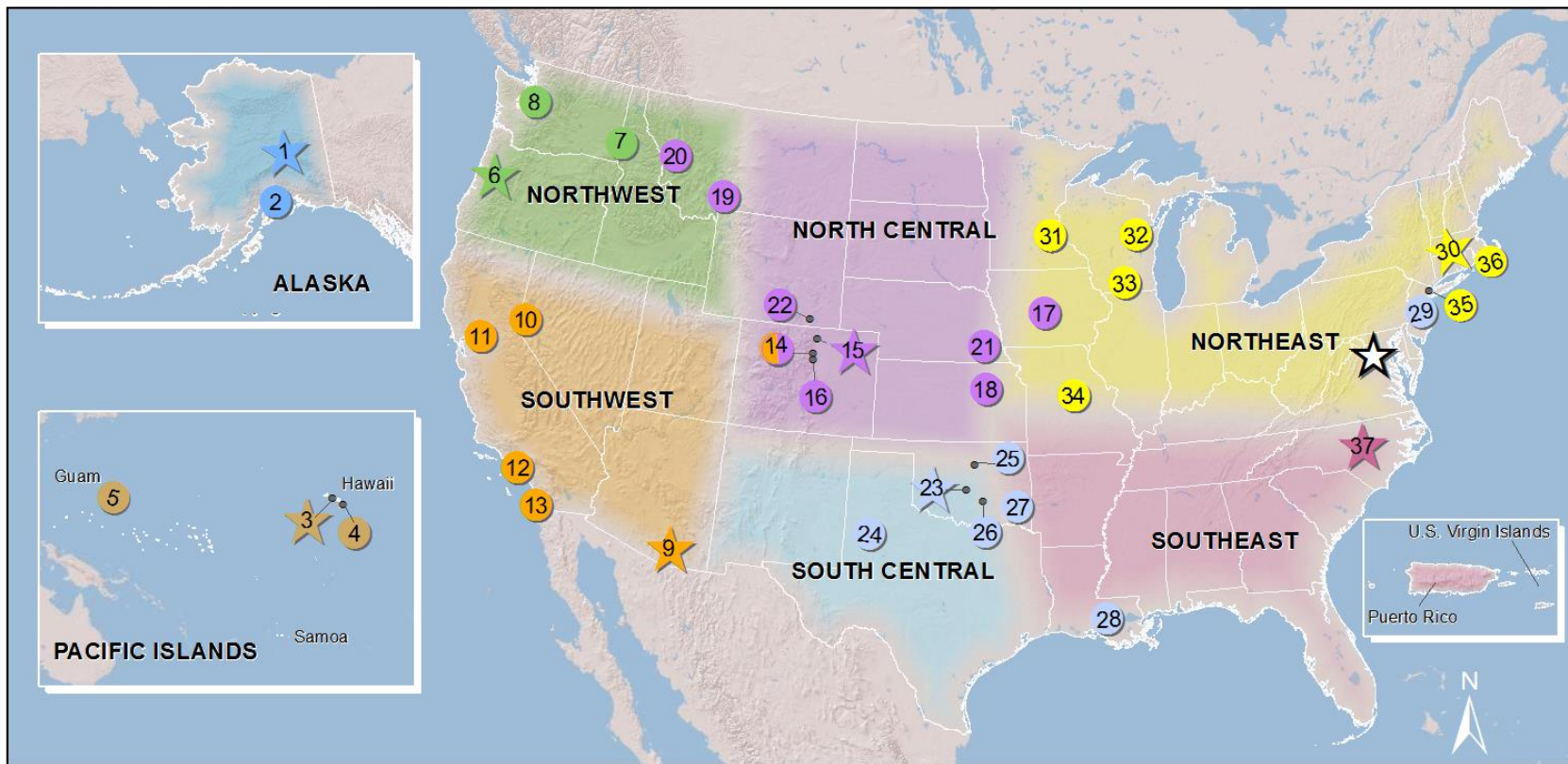
Emily Fort  
Data and Information Coordinator  
USGS National Climate Change & Wildlife Science Center  
Reston, VA

# The Plan

- Who we are, challenges, opportunities
- Approach, policies, process, big picture
- Pieces of the big picture
- Integration
- The future



*How best to support NCCWSC, the CSCs, data management and provide some core tools?*



Base from ESRI, 2009, Albers Equal Area Conic Projection, North American Datum of 1983

## EXPLANATION

★ National Climate Change and Wildlife Science Center

★ CSC Lead Institutions

② CSC Institutions

### Alaska CSC

1. University of Alaska - Fairbanks
2. University of Alaska - Anchorage

### Pacific Islands CSC

3. University of Hawaii at Manoa
4. University of Hawaii at Hilo
5. University of Guam

### Northwest CSC

6. Oregon State University
7. University of Idaho
8. University of Washington

### Southwest CSC

9. University of Arizona
10. Desert Research Institute (Nevada)
11. University of California - Davis
12. University of California - Los Angeles
13. Scripps Institute of Oceanography
14. University of Colorado

### North Central CSC

14. University of Colorado
15. Colorado State University
16. Colorado School of Mines
17. Iowa State University
18. Kansas State University
19. Montana State University
20. University of Montana
21. University of Nebraska - Lincoln
22. University of Wyoming

### South Central CSC

23. University of Oklahoma
24. Texas Tech University
25. Oklahoma State University
26. Chickasaw Nation
27. Choctaw Nation of Oklahoma
28. Louisiana State University
29. NOAA Geophysical Fluid Dynamics Laboratory

### Northeast CSC

- 30. University of Massachusetts Amherst
- 31. University of Minnesota
- 32. College of Menominee Nation
- 33. University of Wisconsin - Madison
- 34. University of Missouri Columbia
- 35. Columbia University
- 36. Marine Biological Laboratory

### Southeast CSC

- 37. North Carolina State University

# Challenges

- Need to know what we are doing and where across the network
- Need to provide some basic capabilities and consistency for the NCCWSC and the CSCs
- Ensure data policies are enforced
- Provide access for university + federal scientists
- Fund ~100 projects each year
- Recognize reality that we are a new and growing program with a small staff



# Opportunities

- Blank slate
- Government policy
- Supportive management
- Recognition of importance of tools and data management
- Extensive capabilities at USGS, other federal agencies, and at the universities



# Approach

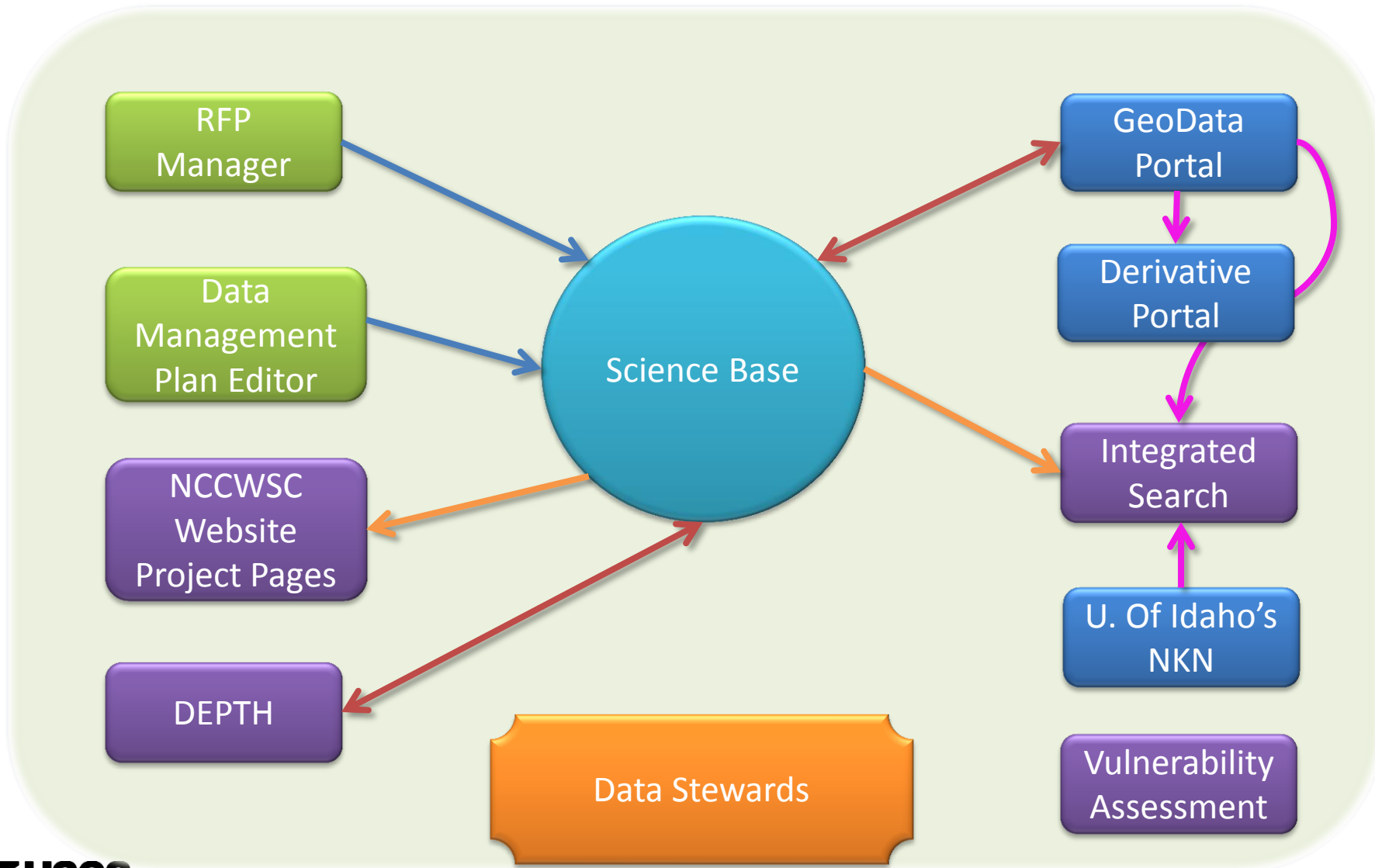
- Don't build another stove pipe
- Provide support to CSCs – both tools **and people**
- Develop data policies
- Link projects to data and products
- Use standards and web services
- Identify integration opportunities
- Develop core capabilities that our partners can link to, integrate, re-imagine

# Data Policies

- All project products (data, models, etc.) will be shared (unless there is a good reason not to)
- Sharing happens when the project is complete
- Data management plans are required
- Common standards should be used
- Metadata must be provided

<https://nccwsc.usgs.gov/content/data-policies-and-guidance>

# The Big Picture





# RFP Manager

- Needed a way to collect proposal information and conduct peer review
- Ensures consistency in process and compliance with policies (including DMP)

DOI Climate Science Center Funding Opportunity efort@usgs.gov | Logout

[Funding Opportunity List](#) > [NCCWSC Test for Help Doc](#) > [NCCWSC Test for Help Doc - SOI Reviews](#) > [Reports](#)

MY Submission - H. Padgett - National Climate Change and Wildlife Science Center and Climate Science Centers SOI Review

Applicant ID NCCWSCJ3-PHI8573

[Printer Friendly](#)  
[Comma-Separated \(CSV\)](#)  
[Expand Comments](#)

Reviewer	Email	Organization	Submission Title	Review Status	Applicability to a high priority need identified by the CSC weight: 30	Scientific merit and quality of the research weight: 30	Engagement of stakeholders, decision makers, and other research entities weight: 30	Potential for cross CSC collaboration weight: 10	Score	Summary of Strengths	Summary of Weaknesses	Comments, Notes
Padgett, Holly	hollypadgett@gmail.com	N/A	review	Complete	10	4	6	8	68	yes yes	no no	yes yes
Padgett, Holly	hpadgett@usgs.gov	National Climate Change and Wildlife Science Center and Climate Science Centers	review									
Averages				In Progress (1/2)	10 σ=0.0	4 σ=0.0	6 σ=0.0	8 σ=0.0	68 σ=0.0			

[flip table]

The review process is In Progress.

[Back](#)

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[Funding Opportunity List](#) > [NCCWSC Holly Test](#) > [Reports](#)

NCCWSC Holly Test Applications

**Confirmed Applications**

[Show Accepted SOIs](#)  
[Download Data as CSV](#)  
[Download Documents \(ZIP\)](#)  
[Download Documents \(flat ZIP\)](#)

ID	Submission Title	Name	Organization	Email	Documents	Stage	SOI NCCWSC Holly Test - SOI Reviews				Proposal <a href="#">Initiate Proposal Reviews</a>			
							Score	State	Admin. <small>[show comments]</small>		Score	State	D.S. Comments <small>[expand comments]</small>	Admin. <small>[show comments]</small>
NCCWSC13-PHI7921	testing 1	Padgett, Holly	National Climate Change and Wildlife Science Center and Climate Science Centers	hpadgett@usgs.gov	SOI NCCWSC Web...pdf Prop. Mills USGS...pdf	SOI Accepted	38	In Progress (1/2)	<a href="#">Accept</a> <a href="#">Reject</a> (already accepted)				<a href="#">Accept</a> <a href="#">Reject</a> (no Proposal submitted)	

Reviews Status SOI Review In Progress (1/2)

[Back](#) [Email Registrants](#)

# Data Management Plan Template

- Organized by inputs and outputs
- For inputs, ask about new collections and use of existing data

1	[Name of Collection]	1	[Name of Output]
Description:	Describe the information that (e.g., landscape, etc.) of the data. Include any existing data used in the project.	Description:	Describe the data output.
Format:	Identify the formats in which the data will be generated, maintained, and made available.	Data Management Resources:	Describe the proposal resources allocated for data management activities for the new data collected as a level of effort, total dollars allocated, or as a percentage of the total project's cost. Resources could include people's time or proposal funding.
Quality Checks:	Specify the procedures used to ensure data quality during the project and an assessment of usability.	Format:	Identify the formats in which the data will be generated, maintained, and made available.
Source:	Identify the source for the data (e.g., existing data, new collection, etc.).	Data Processing & Scientific Workflows:	Describe data processing steps or provide a scientific workflow you plan to use to manipulate the data, as appropriate.
Data Processing & Scientific Workflows:	Describe any data processing steps or provide a scientific workflow you plan to use to manipulate the data, as appropriate.	Quality Checks:	Specify the procedures for ensuring data quality during the project.
Backup & Storage:	Describe the approach for backup and storage of the information associated with the research project during the project.	Metadata:	Identify the metadata standard that will be used to describe the data and products (FGDC, ISO, EML, etc.).
Volume Estimate:	Estimate the volume of information generated: megabyte (MB), GB, TB, or PB.	Volume Estimate:	Estimate the volume of information generated: megabyte (MB), GB, TB, or PB.
Access & Sharing:	Prior to the completion of the project, specify who should have access to project information/products and what type of access (Public, Read, Write, No Access).	Backup & Storage:	Describe the approach for backup and storage of the information associated with the research project during the project.
Restrictions:	Identify any limitations on access or reuse (e.g., sensitive data, restricted data, software with license restrictions, etc.) and provide justification for restriction. Provide citation or documentation describing limitations if due to policies or legal reasons.	Repository for Data:	In addition to the NCCWSC repository (ScienceBase), identify any other repositories where you plan to share your data.
Fees:	Identify any fees associated with the data and associated products (name, email, and phone number).	Access & Sharing:	Prior to the completion of the project, specify who should have access to project information/products and what type of access (Public, Read, Write, No Access).
Citation:	Provide citation for data products.	Exclusive Use:	Project data and associated products should be available publicly at the end of the project. If a request to limit access for a period of time after project completion is needed, please identify the length of time and the reason for the extension. (Request cannot be more than two years.)
		Restrictions:	Identify any limitations on access or reuse (e.g., sensitive data, restricted data, software with license restrictions, etc.) and provide justification for restriction. Provide citation or documentation describing limitations if due to policies or legal reasons.
		Citation:	Specify how the project's data should be cited.
		Digital Object Identifier (DOI)/Link:	Provide a digital object identifier (DOI)/link to the project when available publicly.
		Contact:	Provide a point(s) of contact if questions arise related to the data and associated products (name, email, and phone number).

# Data Management Plan Review

- For each proposal, the proposal data management plan (DMP) is reviewed and comments are provided
- For funded proposals, a data steward works with the research team to complete the full DMP
- At project completion, the data steward works with the research team to transfer the products to the NCCWSC repository - ScienceBase

# ScienceBase

## *What is it?*

- Website
- Provides a data cataloging and collaborative data management platform for USGS scientists and partners
- Central search and discovery application along with web services that facilitate other applications
- Open source project
- Bigger than just the CSCs

<https://www.sciencebase.gov/catalog/>

# Why ScienceBase?

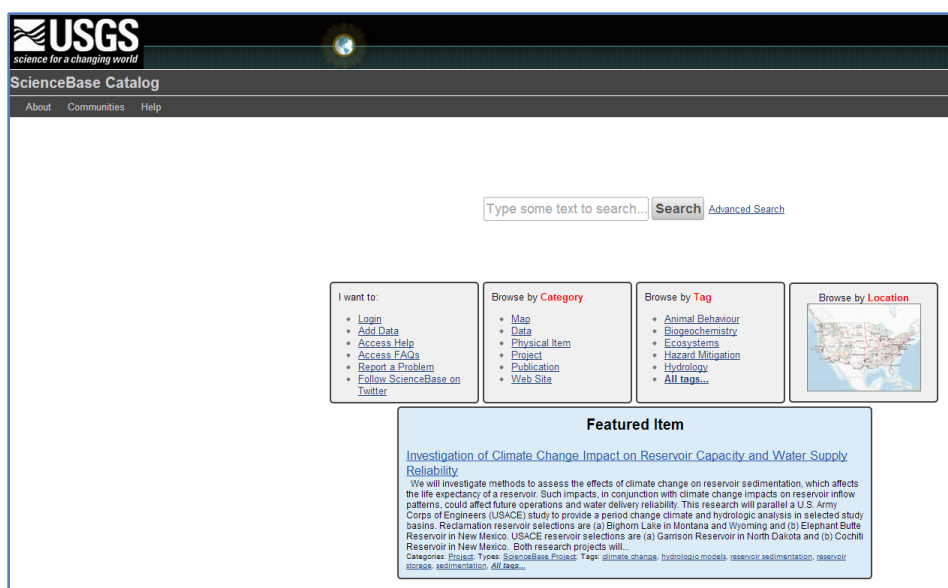
- Powerful and flexible
- Can store many different kinds of data – including large datasets and models
- Core fields and extensible
- Searchable
- Geospatial component
- Available to non-DOI users
- Information can be open (public) or restricted
- Meets federal IT and security requirements
- Web services





# Finding “Stuff” in ScienceBase

- Lots of ways to search



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ScienceBase Catalog

About Communities Help

Type some text to search... [Search](#) [Advanced Search](#)

I want to:

- [Login](#)
- [Add Data](#)
- [Access Help](#)
- [Access FAQs](#)
- [Report a Problem](#)
- [Follow ScienceBase on Twitter](#)


Browse by **Category**

- [Map](#)
- [Data](#)
- [Physical Item](#)
- [Project](#)
- [Publication](#)
- [Web Site](#)

Browse by **Tag**

- [Animal Behaviour](#)
- [Biogeochemistry](#)
- [Ecosystems](#)
- [Hazard Mitigation](#)
- [Hydrology](#)
- [All tags...](#)

Browse by **Location**

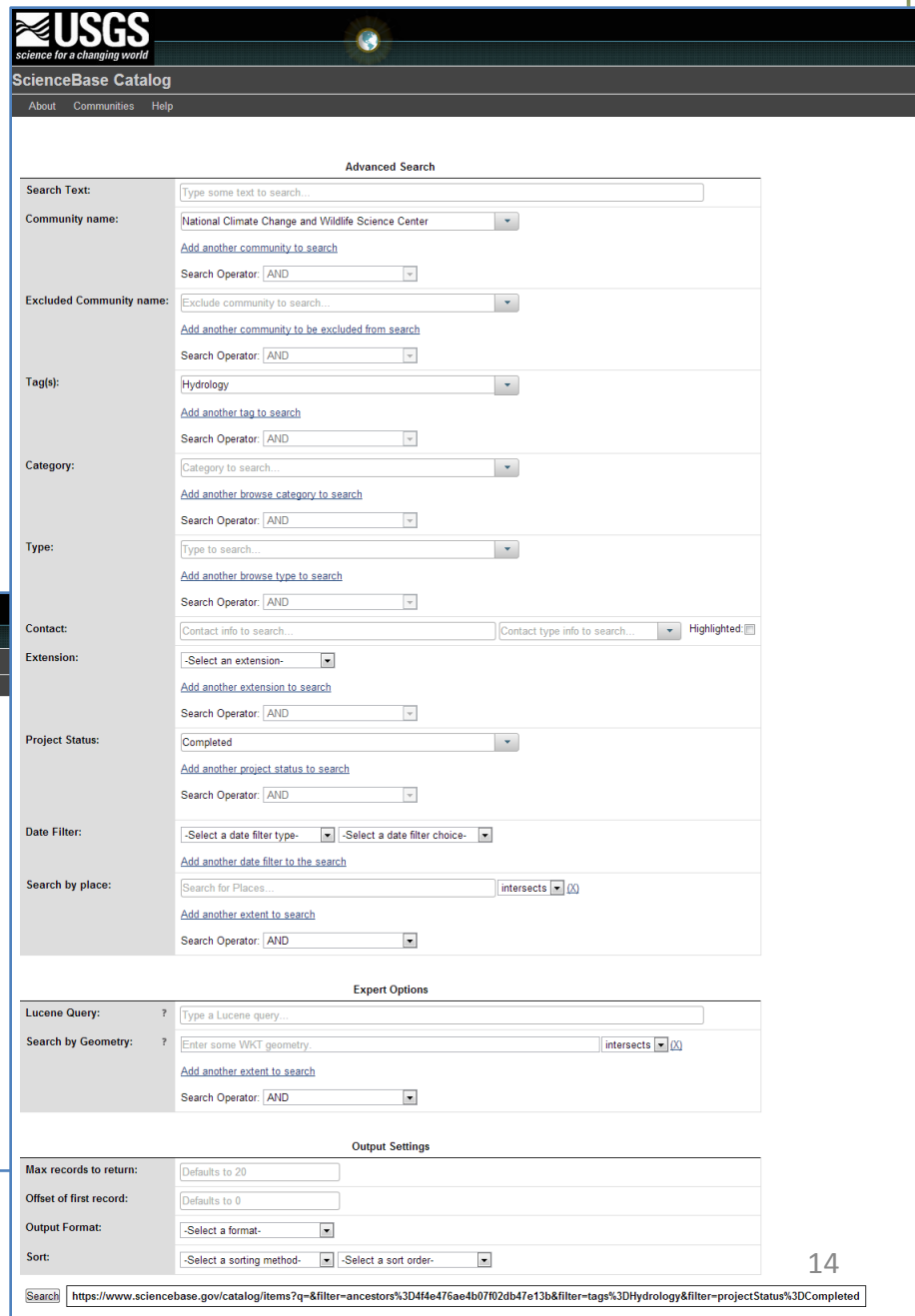


**Featured Item**

[Investigation of Climate Change Impact on Reservoir Capacity and Water Supply Reliability](#)

We will investigate methods to assess the effects of climate change on reservoir sedimentation, which affects the life expectancy of a reservoir. Such impacts, in conjunction with climate change impacts on reservoir inflow patterns, could affect future operations and water delivery reliability. This research will parallel a U.S. Army Corps of Engineers (USACE) study to provide a period change climate and hydrologic analysis in selected study basins. Reclamation reservoir selections are (a) Bighorn Lake in Montana and Wyoming and (b) Elephant Butte Reservoir in New Mexico. USACE reservoir selections are (a) Garrison Reservoir in North Dakota and (b) Cochiti Reservoir in New Mexico. Both research projects will...

Categories: Project Types: ScienceBase Project Tags: climate change hydrologic models reservoir sedimentation reservoir storage sedimentation All tags...



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ScienceBase Catalog

About Communities Help

**Advanced Search**

Search Text:

Community name:  [Add another community to search](#)

Search Operator:

Excluded Community name:  [Add another community to be excluded from search](#)

Search Operator:

Tag(s):  [Add another tag to search](#)

Search Operator:

Category:  [Add another browse category to search](#)

Search Operator:

Type:  [Add another browse type to search](#)

Search Operator:

Contact:   ☐ Highlighted

Extension:  [Add another extension to search](#)

Search Operator:

Project Status:  [Add another project status to search](#)

Search Operator:

Date Filter:   [Add another date filter to the search](#)

Search by place:   ☐ [Add another extent to search](#)

Search Operator:

**Expert Options**

Lucene Query:

Search by Geometry:   ☐ [Add another extent to search](#)

Search Operator:

**Output Settings**

Max records to return:

Offset of first record:

Output Format:

Sort:

[Search](#) <https://www.sciencebase.gov/catalog/items?q=&filter=ancestors%3D4f4e476ae4b0702db47e13b&filter=tags%3DHydrology&filter=projectStatus%3DCompleted>

# ScienceBase Organization

**ScienceBase Catalog**

About Communities Add Item My Items My Tasks Help efort@usgs.gov Logout

**Folders** Manage

**My Items**

**Communities**

- 2010 Colorado Wildfires: Fourmile Canyon and
- Bureau of Ocean Energy Management - Environ
- Coastal and Marine Spatial Planning
- Community for Data Integration (CDI)
- DataOne
- Eastern Montana Fisheries
- Energy and the Environment in the Rocky Moun
- Energy Development and Natural Resources in
- Fisheries
- Fort Collins Science Center
- Global
- Great Lakes Science Center
- Greater Platte River Basin
- Integrated Landscape Modeling (ILM)
- Kansas Water Science Center
- Landscape-scale Energy Action Plan
- LC MAP - Landscape Conservation Manage
- Multistate Aquatic Resources Information Syst
- National Climate Change and Wildlife Science
- Alaska CSC
- LCC Support Activities
- NCCWSC
- North Central CSC
- Northeast CSC
- Northwest CSC
  - FY 2011 Projects
  - FY 2012 Projects
    - Science Projects
      - Climate Change and Peak Flows
      - Climate, Land Management and
      - Climate-Change Vulnerability in t
      - Correlation and Climate Sensitivit
      - Extended Monitoring and Modelir
      - Improving Understanding of Three
      - Integrated Scenarios of Climate,
      - Marshes to Mudflats: Climate Ch
      - Predicting Climate Change Impac
      - Sagebrush Ecosystems in a Cha
      - Utilizing Yurok Traditional Ecolog
    - Science Support Projects
    - New Projects from RFP
    - NW CSC Documents
    - Pacific Islands CSC
    - Public

Communities → National Climate Change and Wildlife Science Center → Northwest CSC → ... → Science Projects → Climate Change and Peak Flows: Knowledge-to-Action to Help Managers Address Impacts on Streamflow Dynamics and Aquatic Habitat

Search within this folder Add

Title	Date Modified	
Approved DataSets	2012-09-04T18:10:50.998Z	<span>Manage</span>
Approved Products	2012-09-04T18:10:55.165Z	<span>Manage</span>
BASIS	2012-09-04T18:10:41.709Z	<span>Manage</span>
Other (Approved for Public)	2012-09-04T18:11:06.809Z	<span>Manage</span>
Working (Restricted Access)	2012-12-14T18:33:15.153Z	<span>Manage</span>

[Search Here](#) [Deep/Nested Search Here](#) [Item Summary/Details](#)

- Designated workspaces for Communities that allow cataloging, managing, and sharing information publicly or privately
- Ability to catalog existing items and contribute new content
- Flexible permissions
- Collections organized by datasets, products, other, and a working folder

# ScienceBase Project Record

## Geospatial

- Shapefiles
- Geotiffs
- Polygon

## Note

- Tags
- Communities
- Related items

Communities → National Climate Change and Wildlife Science Center → Northwest CSC → ... → Science Projects → Climate Change Threats to Fish Habitat Connectivity: Growth and Predation

Manage

Provenance

**Catalog Item:**  
*Created by:* hpadgett@usgs.gov on Wed Jul 18 11:40:04 MDT 2012  
*Last Updated by:* madeline\_steele@fws.gov on Wed Aug 28 10:11:46 MDT 2013

Tags

Topics:  
[2011](#)  
[CSC](#)  
[Climate Change](#)  
[Habitat Connectivity](#)  
[Northwest CSC](#)  
[All tags...](#)

Categories:  
[Data](#)  
[Project](#)

Types:  
[Downloadable](#)  
[Map Service](#)  
[OGC WFS Layer](#)  
[OGC WMS Layer](#)  
[Shapefile](#)

View [JSON](#) [ATOM](#) [ISO XML](#)

An interdisciplinary U.S. Geological Survey (USGS) team has been working with local stakeholders in the Methow River (a tributary of the Columbia River) in arid eastern Washington State to develop decision support tools with which to evaluate possible climate change effects on natural resources, human economies and Native American cultural values. A stakeholders' workshop was held, which was attended by local politicians; federal, state and NGO resource managers; ranchers/farmers and Tribal representatives. Products from the workshop included stakeholder-defined goals for adapting to climate change. An important aspect of adaptation of aquatic resources in the Methow Basin is the role of habitat connectivity on the ability of native fishes to obtain food. Native fishes participate in feeding both as predators and as prey. With funds from the Great Northern LCC and the Northwest Climate Science Center (NW CSC), we will examine the influence of temperature, habitat availability, and flow under normal conditions and under climate change scenarios to simulate growth and consumption by fish and estimate the potential impact of predation on juvenile ESA-listed salmon. Specific tasks to be completed are: (1) determine if large bodied fish (bull trout, cutthroat trout and mountain whitefish) feeding in the mainstem Columbia River experience increased growth, which increases their predation on juvenile salmon in the Methow River; (2) develop parameters for bioenergetics models for bull trout and mountain whitefish to predict their growth under predicted climate change scenarios; and (3) determine current and potentially available side-channel connectivity, which provides rearing areas and refugia from predation for juvenile fish, in the mainstem Methow River. Thus far, we have (1) collected otoliths from mountain whitefish (our surrogate, non-ESA listed, large-body predator); (2) validated bioenergetics parameters for bull trout; and (3) completed a preliminary on-the-ground assessment of side channels in the Methow. With NW CSC funds we will model possible effects of climate change on fish habitat by completing the side channel assessment and combining that with existing tributary and mainstem models that predict flow under several climate change scenarios. These predicted changes will be run through an existing fish habitat decision support system to predict changes in habitat.

[Read more...](#)

**Original Metadata:**

- [columbia.shp.xml](#)
- [Entiat.shp.xml](#)

**Principal Investigator:** [Patrick J Connolly](#)  
**Co-Investigator:** [Matthew G Mesa](#), [Jill M Hardiman](#), [James R Hatten](#), [Alec G Maule](#)  
**Cooperator/Partner:** [Michael Newsome](#), [Jennifer Bountry](#), [Michelle Schmidt](#), [Karen Jenni](#), [Colden Baxter](#), [Lee Hatcher](#)

**Start Date:** 2010  
**End Date:** 2012

[Interactive Mapper](#) - [Open in Google Earth \(KML\)](#) - [Advanced Services](#)

Communities

LC MAP - Landscape Conservation Management and Analysis Portal  
National Climate Change and Wildlife Science Center  
North Pacific Landscape Conservation Cooperative  
Northwest CSC

Related Items

Parent Item: [Science Projects](#)

Child Items: [\(5\)](#):

- [Approved DataSets](#)
- [Approved Products](#)
- [BASIS](#)
- [Other \(Approved for Public\)](#)
- [Working \(Restricted Access\)](#)

Other Associated Items:  
[Associate an Item](#)

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# Editing a Project's Metadata

- Extensions added for custom fields

**ScienceBase Catalog**

AboutCommunitiesAdd ItemMy ItemsMy TasksHelp

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**Edit:** [Climate Change and Peak Flows: Knowledge-to-Action to Help Managers Address Impacts on Streamflow Dynamics and Aquatic Habitat](#)

WhatFromWhoWhenWhereHowTagsFiles (0)Extensions (2)External Sources

Title?

Climate Change and Peak Flows: Knowledge-to-Action to Help Managers Address Impacts on Streamflow Dynamics and Aquatic Habitat

Folder?

Science Projects

Current

Look Up

Search for an item...

Select from Tree

Subtitle?

Body?

Previous studies have shown that snow layers throughout the Cascade Mountains in the Northwest U.S. are highly vulnerable to warming temperatures, melting earlier and changing more readily from snow to rain. Less certain is how these changes are likely to affect streamflows, particularly in streams that derive much of their flow from deep groundwater and springs. These groundwater streams, which are currently characterized by very stable stream beds, banks, and vegetation, are paradoxically particularly sensitive to increasing peak flows in the winter, which may potentially change their suitability as habitats for threatened species, such as bull trout and spring Chinook salmon. Through a study of watershed models, this project aims to discover how the warming climate, changing snow accumulations, and increasing peak flows are likely to affect these stream channels. Results will include field and modeling components and will guide management decisions affecting these streams, including how to operate dams, if water suppliers should plan for increased turbidity, and how to manage vegetation along rivers.

Purpose?

Rights?

Alternate Titles?

Add Alternate Title

Identifiers?

Add Identifier

\*\* Item with children can not be deleted.

Save✔Cancel✖Delete✖

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# ScienceBase Web Services

- Other sites can consume and present information from ScienceBase with their own look and feel using ScienceBase's REST service architecture using JSON
- Examples:
  - The NCCWSC website project pages consume ScienceBase web services and styled by Drupal
  - DEPTH consumes ScienceBase web services and filters for records with project tag



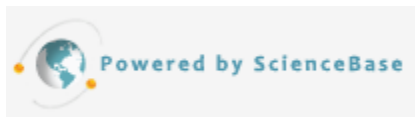
# NCCWSC Website Project Pages - Summary

- Organized by CSC and by Fiscal Year Funded
- Icon to indicate map or data/product

<a href="#">Home</a> <a href="#">Projects</a> <a href="#">FY 2011 Projects</a> <a href="#">FY 2011 Projects</a>			
Science Center Projects			
FY 2011 Projects - FY 2011 Projects			
Science Projects			
Active Year(s)	Title	Principal Investigator(s)	Contains
2010-2012	<a href="#">Climate Change Threats to Fish Habitat Connectivity: Growth and Predation</a>	Patrick J Connolly ( <i>USGS Columbia River Research Laboratory</i> )	
2011-2014	<a href="#">Contribution of Landscape Characteristics and Vegetation Shifts from Global Climate Change to Long-Term Viability of Greater Sage-grouse</a>	Steven T Knick ( <i>U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center</i> ) Sara J Oyler-McCance ( <i>U.S. Geological Survey Fort Collins Science Center</i> )	
2011-2012	<a href="#">Disentangling the Effects of Climate and Landscape Change on Bird Population Trends in the Western U.S. and Canada</a>	Matthew Betts ( <i>Forest Ecosystems and Society, Oregon State University</i> ) Susan Shirley ( <i>Forest Ecosystems and Society, Oregon State University</i> ) Joan Hagar ( <i>U.S. Geological Survey Forest &amp; Rangeland Ecosystem Science Center</i> )	
2011-2012	<a href="#">Identification and Laboratory Validation of Temperature Tolerance for Macroinvertebrates: Developing Vulnerability Prediction Tools</a>	Robert W Black ( <i>Washington Water Science Center</i> )	
2011-2012	<a href="#">Modeling Effects of Climate Change on Cheatgrass Die-Off Areas in the Northern Great Basin</a>	Bruce K Wylie ( <i>U.S. Geological Survey Earth Resources Observation and Science Center</i> ) Stephen Boyte ( <i>U.S. Geological Survey, Earth Resources Observation and Science Center &amp; SGT, Inc.</i> ) Donald Major ( <i>Bureau of Land Management Idaho and Great Basin Restoration Initiative</i> )	
2011-2014	<a href="#">Range-Wide Climate Vulnerability Assessment for Threatened Bull Trout</a>	Jason B Dunham ( <i>U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center</i> )	 
2011-2014	<a href="#">Toward Next Generation Downscaling for Hydrologic Prediction in the Pacific Northwest (Using Multivariate Adaptive Constructed Analogs - Variable Infiltration)</a>	Philip Mote ( <i>Oregon State University</i> ) Dennis Lettenmaier ( <i>University of Washington</i> ) John Abatzoglou ( <i>University of Idaho</i> )	 

CSC Projects:  
<https://nccwsc.usgs.gov/project-pages/4f4e476ae4b07f02db47e13b>

# NCCWSC Website Project Pages - Detail



Example URL:  
<https://nccwsc.usgs.gov/display-project/5006c1e5e4b0abf7ce733f3b/5006f498e4b0abf7ce733f92>



## Modeling Effects of Climate Change on Cheatgrass Die-Off Areas in the Northern Great Basin

### Project Information

#### Principal Investigator(s):

Bruce K Wylie (U.S. Geological Survey Earth Resources Observation and Science Center)  
 Stephen Boyte (U.S. Geological Survey, Earth Resources Observation and Science Center & SGT, Inc.)  
 Donald Major (Bureau of Land Management Idaho and Great Basin Restoration Initiative)

**Start Date:** October 2011

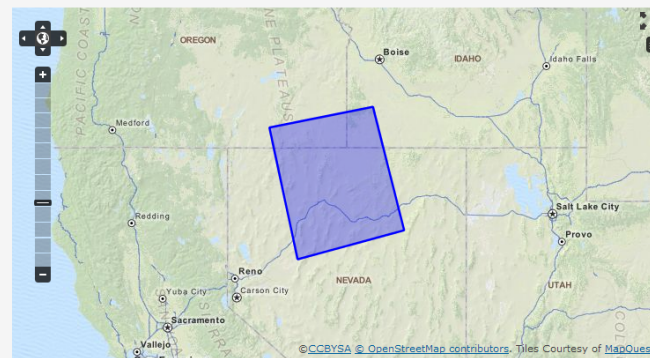
**End Date:** September 2012

**Project Status:** Completed

**Tags:** Climate Change, Cheatgrass, Great Basin, CSC, Northwest CSC, 2011, Science Project

**CSC/NCCWSC Affiliation:** [Northwest CSC](#)

**Fiscal Year:** [FY 2011 Projects](#)



### Summary

Cheatgrass (*Bromus tectorum*) is a dominant invasive species across large areas of the Great Basin. In recent years, the die-off of cheatgrass has been observed across relatively large areas in the region with an estimated 500,000 acres of affected area reported in the general vicinity of Winnemucca, NV. However, actual extent of the phenomenon could be considerably larger as die-offs are occurring in smaller areas across portions of the Northern Great Basin. As part of the Bureau of Land Management's (BLM) Integrated Cheatgrass Dieoff Project, U.S. Geological Survey (USGS) Earth Resources Observation Systems (EROS) Center scientists in collaboration with Don Major, BLM Landscape Ecologist, have developed a cheatgrass performance model that incorporates seasonally integrated normalized difference vegetation index (NDVI) from the enhanced Moderate Resolution Imaging Spectroradiometer (eMODIS) along with environmental attributes. Based on the die-off areas in the area surrounding Winnemucca and in the Owyhee Uplands, we propose to predict areas of potential cheatgrass die-offs under future climate projections and make climate-based forecasts of these die-off areas.

### Products & Data

#### Cheatgrass Dieoff Time-series Dynamics (2000-2010)

Land Cover Applications and Global Change ([External URL](#))

#### Cheatgrass dieoff in Northern Great Basin Final Report

Cheatgrass dieoff in Northern Great Basin FINAL REPORT 09JUL12.pdf ([Download](#))

#### Identifying cheatgrass dieoff in the Great Basin by integrating eMODIS NDVI data with ecological models

Society for Range Management ([External URL](#))

#### Mapping Interannual cheatgrass production and dieoff in the Great Basin using remote sensing data and ecological models

YouTube Video ([External URL](#))

#### ReadMe file to accompany the report "Mapping Cheatgrass Dieoff in the Northern Great Basin using Ecosystem Performance Modeling"

ReadMe.docx ([Download](#))

#### Data

- ▶ [Cheatgrass Percent Cover Maps](#)
- ▶ [Cheatgrass Dieoffs](#)

#### Maps

- ▶ [Cheatgrass PercentCover](#)
- ▶ [Cheatgrass Dieoffs](#)

# DEPTH

- Project-centric view of ScienceBase information
- Searchable by many filters, including science agenda
- Intuitive entry of new records
- Assists with CSC regional coordination

Example:

<https://my.usgs.gov/depth/#/viewProject/5006f498e4b0abf7ce733f92/csc>

DEPTH Project Editor ▾

Organization Types

choose organization type:

Organizations (27)

choose organizations

Fiscal Years

choose fiscal years

Project Types

choose project types

Principal Investigators (306)

choose pis

Keywords

choose keywords

Project Status

choose project status

Projects (300)

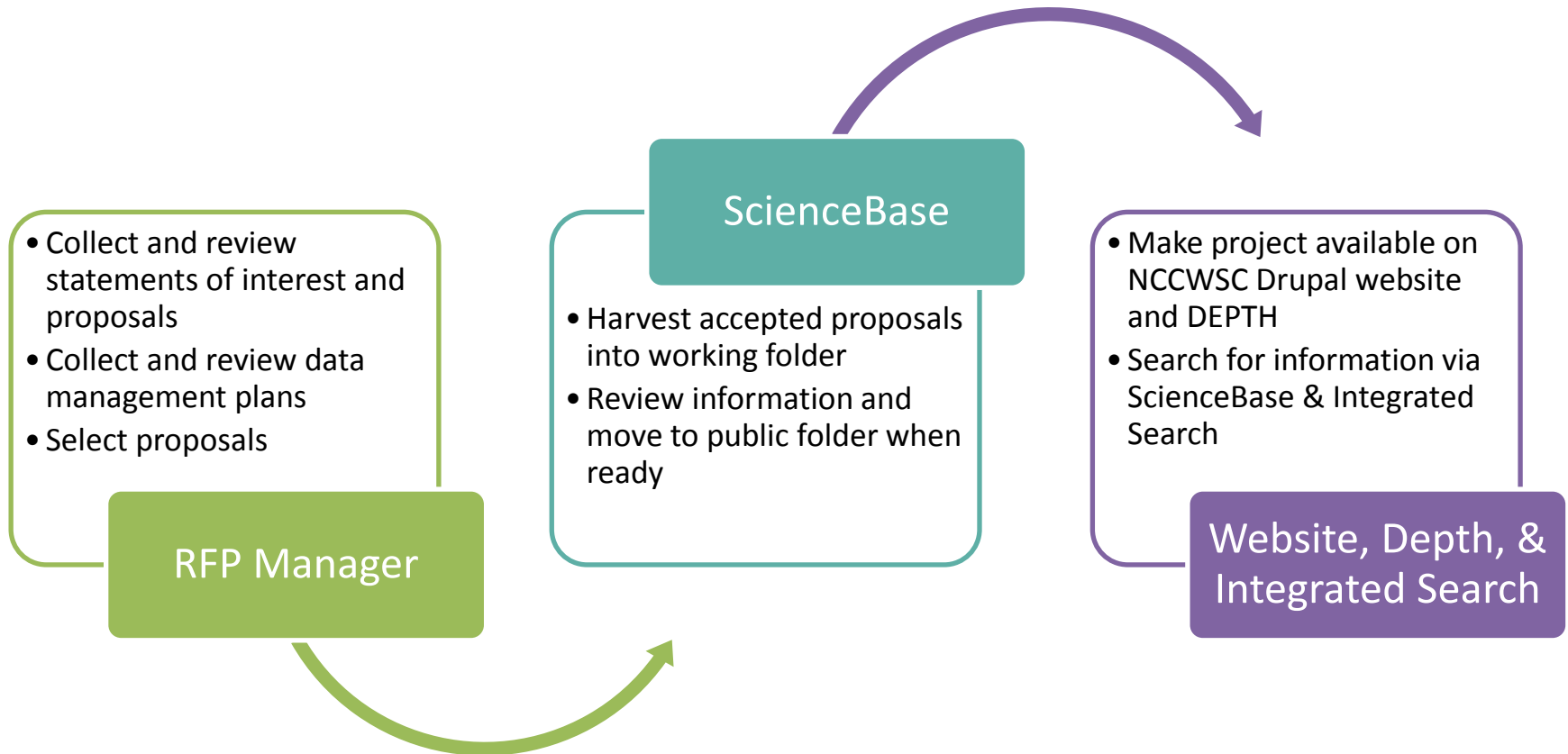
choose project names

Agendas

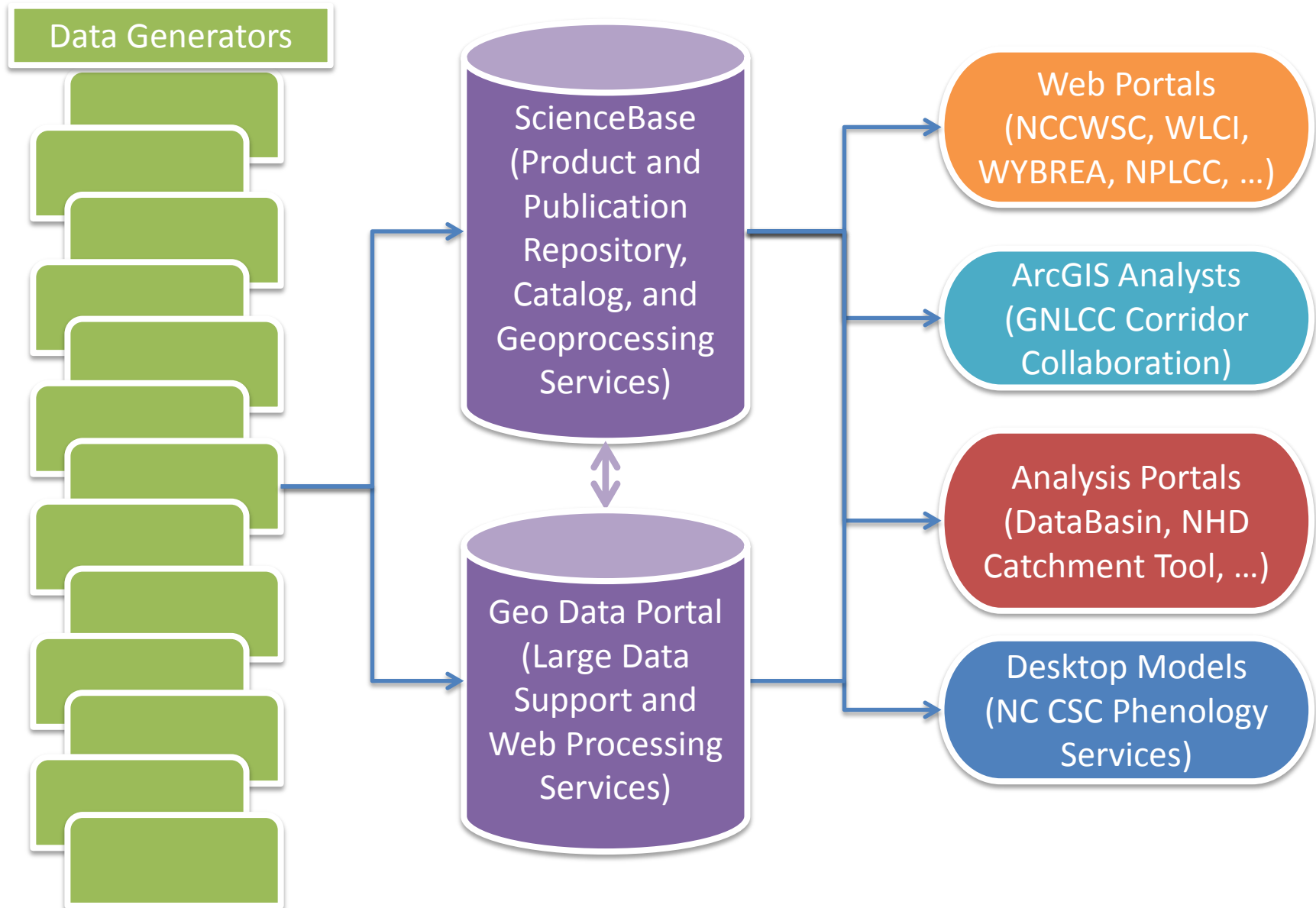
Choose Agenda ▾

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# Steps Along the Way



# How Does This Work with Other Stuff?





# Geo Data Portal

- Tool to help scientists use and subset large datasets such as climate information
- Standards based
- Integrated with ScienceBase



# Integrated Search

- Search multiple data repositories at the same time
- Uses common metadata standard
- Works by using csw (catalog service for the web) search
- Give us feedback!

[https://nccwsc.usgs.gov/integrated\\_search](https://nccwsc.usgs.gov/integrated_search)

Simple Search

Advanced Search

Any Text contains climate Search

ScienceBase (520) GeoData Portal (12) NKN (18)

1. [Oregon Climate Assessment Report, Oregon Climate Change Research Institute](#)  
**Abstract:**  
**Source:** <https://www.sciencebase.gov/catalog/item/50bcffc3e4b069d93eefc4a1>

2. [Assessment of Climate Change in the Southwest U.S.](#)  
**Abstract:** Assessment of Climate Change in the Southwest United States—a contribution to the 2013 National Climate Assessment—is a summary and synthesis of the past, present, and projected future of the region's climate, emphasizing new information and understanding.  
**Source:** <https://www.sciencebase.gov/catalog/item/51efd127e4b0b09f5e58f21f>

3. [PNW Climate Science Conference Information](#)  
**Abstract:** Website for the Third Annual Pacific Northwest Climate Science Conference.  
**Source:** <https://www.sciencebase.gov/catalog/item/51101e3de4b048b5cead84f5>

4. [Comparative Analysis of Downscaled Climate Simulations, Providing Guidance to End Users](#)  
**Abstract:** To understand potential climate change impacts on ecosystems, water resources, and numerous other natural and managed resources, climate change data and projections must be downscaled from coarse global climate models to much finer resolutions and [...]  
**Source:** <https://www.sciencebase.gov/catalog/item/5012a529e4b05140039e02cd>

5. [The U.S. Geological Survey Climate Geo Data Portal: An Integrated Broker for Climate and Geospatial Data](#)  
**Abstract:**  
**Source:** <https://www.sciencebase.gov/catalog/item/519be2b9e4b0e4e151efec9>

|| next >>

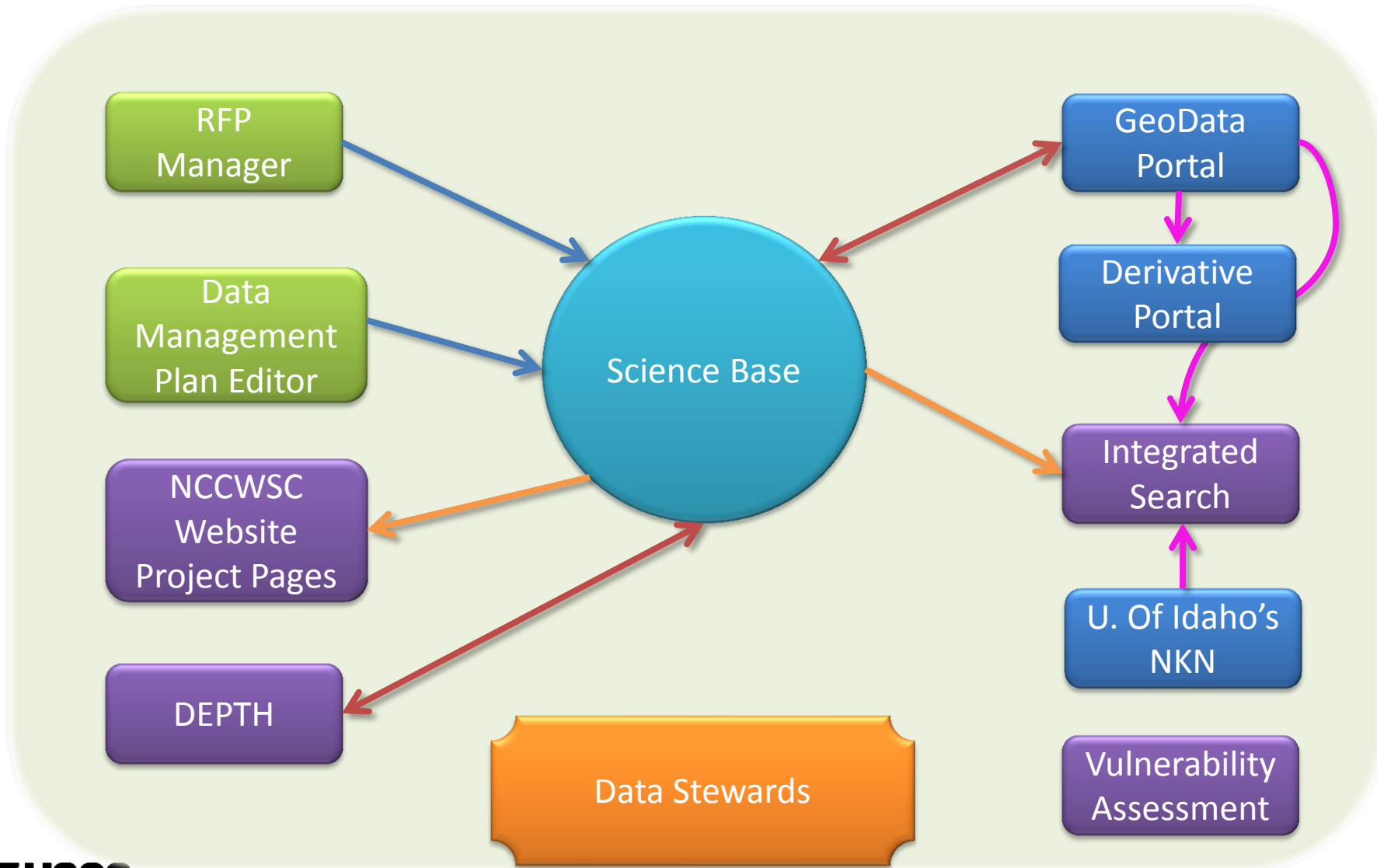
Find information from multiple sources and catalogs in one quick search!

Use the integrated search to find data and project information from the [USGS Center for Integrated Data Analytics Geo Data Portal](#), the [USGS ScienceBase catalog](#), and the [University of Idaho's Northwest Knowledge Network](#).

The Integrated Search is a new feature so we would appreciate any [feedback](#).

For instructions for adding new catalogs to the integrated search, check the [FAQ](#) page.

# The Big Picture



## Link to LCCs and Others

- ScienceBase and related tools used or being considered by several LCCs (aka LC Map)
- ScienceBase team part of the LCC Network's Integrated Data Management Network project (IDMN)
- ScienceBase also used by other parts of USGS and other partners
- Cross-fertilization of data management working groups

# So What Does All This Accomplish?

- Provides core, basic capabilities for CSCs that also provide necessary information to the NCCWSC
  - RFP Manager
  - Project Information
  - Data Management
  - Data Repository
- Leverages ongoing work and developed features and tools that others can use
- Supports growth and program's future
- Supports good data management





## Where Do We Go From Here?

- Learn lessons from DMPs to improve guidance, clarify, walk line of getting the right amount of information at the proposal stage
- Identify areas for future collaboration and integration with partners and CSC members
- Develop additional tools and features as needed (and as resources allow)
- Add features (DOIs, better metadata tools)
- Follow evolution of government policy and tools

# Questions?

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